THE ROLE OF THE PETROLEUM INDUSTRY IN THE DEVELOPMENT OF THE NIGERIAN ECONOMY

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As many economic books confirm, the great ideas in economics are essentially simple ideas. They were discovered by men who recognized this simplicity and these men fortunately have often expressed themselves in simple economic terms. This thesis "The Role of Petroleum Industry in the Development of the Nigerian Economy", consists chiefly of readings of what actually transpired during the advent of the petroleum industry in the nation. Some of the readings in this study explain theories usually found in the basic textbooks. They are selected according to the criteria.

This compilation of readings was made possible through the generous assistance of my thesis supervisor Dr. Margaret C. Simms. I vehemently acknowledge with thanks my gratitude to Dr. Simms who has read through several drafts and given me valuable criticism and useful correction. My thanks also go to the entire committee members of this thesis--Dr. Ranjit Singh and Dr. Sidney Davis who read the drafts and gave necessary criticism and suggestions that guided my bold attempt in this essay. I also acknowledge my thanks to Dr. U. Onwuka who read entire drafts and edited them accordingly.

My colleagues gave me valuable encouragement to be dynamic and painstaking in my efforts to develop an appropriate contribution which will be acceptable in the economic world and I would like to thank them.

B.M.U.

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CHAPTER I

INTRODUCTION

This study is an attempt to present the role of the petroleum industry in the development of the Nigerian economy, and to examine the effects it has on the external trade of the country. Here the term oil refers to petroleum and natural gas only, thus excluding all other kinds of oil such as palm oil and groundnut oil, etc. In addition, this study attempts to examine the distribution of concessions and the effects they have on the Nigerian economy.

The writer believes that this study will reveal, to some extent, the potential for the growth of the oil industry in Nigeria. On a broader framework, it is hoped that by studying the effort to transmute the possible into real, a valuable lesson may be learned which will be relevant to other modern industries in Nigeria.

Post World War II Era

In the post World War II era, the study of economic development in the developing countries drew the attention of economists throughout the world. One of the areas of their concern has been the role of export oriented industries in promoting economic development. It is because of this that an attempt was made to study the role of the petroleum industry as a catalytic agent in the rapid development of the Nigerian economy.

To put the subject in the proper perspective, it is necessary to give a broad outline of the Nigerian economy. Like other developing economies, it is primarily a capital scarce economy. But it is by no means obvious that additional capital, whether borrowed from abroad or accumulated through the exertions of surplus labor in the countryside, would itself suffice to start off a process of industrialization.

Some of the Problems in Economic Development

The difficulties in economic development often stem from problems of organization, capital creation, and manpower training. However, creating a new attitude towards industrial employment; taking advantage of innovations that need little capital; and using the gains derived from development to finance investment elsewhere are also important. The ability to remove these problems of development is a major concern of many developing countries. Most developing nations do remove these difficulties by resorting to foreign aid. The role of foreign capital is clear to every developing nation. Foreign capital plays two different roles in the course of development process. First, when domestic savings are not the factors limiting development, foreign capital is needed because it brings with it certain abilities and skills that are in short supply in developing countries. But this does not mean that capital contribution should be necessarily and entirely depended upon without the provision of skills and technical know-how and entrepreneurship.

There is general agreement that in all countries, the progress of economic growth and capital accumulation are closely connected. It was in terms of this connection that the earliest theories of economic development were formulated, and in the work of modern economists output is still assumed to be limited by capital whether there is abundant labor or not. A high rate of capital formation usually accompanies rapid growth in productivity and income, but the causal relationship between the two is complex and does not permit any facile assumption that more capital formation will by itself bring about a corresponding acceleration in the growth of production. In industrial countries this is obvious. Capital formation may assume many forms, such as residential construction or an addition to liquid assets, that are unlikely to add very perceptibly to productivity although they may yield a sufficient return to make them worthwhile.

Nigeria's Efforts in Economic Development

Historically, agricultural products have had a dominant role in the Nigerian economy and in the exports of the country. The most important products were cocoa, groundnuts and groundnut products, palm oil, and palm kernels. Other commodities exported were raw cotton, hides, and skins, rubber, timber and plywood. In addition to these agricultural products, the only significant export commodity was and is tin ore and (since 1962) tin metal. The total value of these commodities amounted to 190 million Nigerian naira in 1966, which is equivalent to U.S. $285 million.

Nigeria has been working hard to improve its economic potential. Its own efforts have been supplemented by foreign aid and by recent attempts to explore for oil. These attempts have been successful and, as a consequence, we find that oil exports have constituted nearly 33 per cent or more of the exports of Nigeria in recent years. The availability of petroleum will help in the development of a petro-chemical complex and other complementary industries in the Nigerian economy which will not only help provide better jobs for Nigerians but will also provide necessary inputs for the development of agriculturally based industries in the economy.[1] Exporting oil and utilizing oil and establishing oil refining and other associated industries will also help to diversify the economy.

The Role of Petroleum in Nigeria

In the early days of the petroleum industry, the principal use of crude oil was for the production of kerosene for illuminating purposes, with lubricants and fuel oils as by-products. Today, it provides gasoline for internal combustion engines and supplies heating oil for domestic and industrial purposes. Indeed, petroleum is employed in practically every industry; and in many industries, it is a vital necessity. As a lubricant it is to be found in every home as well as in every industry.

In its technical and scientific development, the petroleum industry has made great advances, and this is particularly so during the last twenty-five or thirty years. In every phase of its operations, from exploration to utilization, there is research in progress seeking new and improved processes and new uses. Should nuclear power ever replace petroleum as a fuel, the industry will find new uses for its products. For example, refining processes established at Port-Harcourt are constantly being modified to meet changing marketing requirements. It has only been a few years since the industry commenced the production of raw materials for the manufacture of chemicals, plastics, synthetic rubber, and other

[1] L. H. Schatzl, Petroleum in Nigeria (Ibadan: Oxford University Press, 1969), p. 152.

products on a large scale. There is also a large heavy organic chemical industry employing petroleum-based raw materials located at Port-Harcourt. This industry has grown tremendously and it is now classified as a separate industry.

Since the beginning of 1958, Shell Petroleum Development Company has been exporting Nigerian crude oil. Crude oil has climbed within a short time to become by far the most important export product of Nigeria. The export value of this primary energy source increased annually and in 1966, it was officially reported to be ninety-two million Nigerian naira. The proportion of crude oil in the total exports of the country increased from 0.8 per cent in 1956 to 33 per cent in 1966. The growth rate of crude oil exports exceeded that of the entire traditional domestic export commodities.

In assessing the impact of the petroleum industry on the economy, it must not be forgotten that this industry helps to improve the balance of payments of the country. This is due to the fact that the value of the exports of the crude oil exceeds the value of the industry's imports at present.

The Main Framework of the Study

This study consists of four chapters. In Chapter II the general framework of economic development is set forth. The importance of capital formation is explained; the sources of capital, savings and investment are described and other vehicles by which economic development is generated are listed. In Chapter III the history and present state of the petroleum industry in Nigeria are outlined. The distribution of oil concession areas in the country according to individual companies participating in the industry is also given. The findings of the study are summarized in Chapter IV.

CHAPTER II

ECONOMIC DEVELOPMENT PROCESS

Introduction

The preceding chapter explored the role of the petroleum industry in the development of the Nigerian economy. It further examined the effects the industry has on the external trade of the country. In a more specific manner, it explained how modern economists are interested in the development of underdeveloped countries.

This chapter develops a general theory that governs economic development, it covers basic definitions of economic development, the need to modify factors of production, capital accumulation and development. Sources of capital formation, the role of government and other important factors in economic development will also be examined.

Definitions of Economic Development

Economic development has as many definitions as there are economists. According to Gerald M. Meier, economic development is defined as the process whereby the per capita income of a country increases over a long period of time.[1] Harvey Leibenstein asserts that there is no traditionally established and clear-cut notion as to what is meant by economic development. He states that ideas of change and betterment are involved;[2]

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[1]Gerald M. Meier, Leading Issues in Economic Development, Studies in International Poverty (New York: Oxford University Press, Inc.,)970), p. 7.

[2]Harvey Leibenstein, Economic Backwardness and Economic Growth

but this is not all. Theodore Morgan defines economic development as improvement in the economic welfare of the masses (e.g., improving the standard of living of the masses--those on old-age assistance and aid to families with dependent children), or as expansion in productive capacities.[3] An alternative definition might include the change from an agricultural society to an industrial one. A period of change, growth, wealth, and betterment are implied. In the modern economy, be it industrial or agrarian, production is a major vehicle on which the development process is based. Production has several ingredients that are responsible for its growth. These ingredients of production will be examined separately below.

Modifying Factors of Production

Considerable stress has been placed upon the importance of the availability of factors of production. The three factors of production are land, labor, and capital. Land is defined as all natural resources, including rivers and streams, mineral deposits and undomesticated animal life, as well as soil. Labor is defined as human effort applied to production. Capital consists of all goods produced by man which are used for further production such as machines and factories. Most developing countries have large numbers of potential workers who are partially or completely unemployed, but there is a serious shortage of capital. Therefore, it is not surprising that people often stress the importance of

(New York: John Wiley & Sons, Inc., 1963), p. 285.

[3]Theodore Morgan, Readings in Economic Development (Belmont, California: Wadsworth Publishing Company, Inc., 1963), p. 285.

selecting industries which make maximum use of the abundant factor—labor, and a minimum use of the scarce factor—capital. A United Nations report on development expresses the viewpoint in this way:

> Other things being equal, therefore, in most developing countries it is labor intensive rather than capital intensive industries that would appear likely to possess the great relative competitive advantage even when the productivity of labor is somewhat lower than in the more advanced countries.[4]

The development process in an economy is largely a function of capital formation. The method by which capital is brought together with technical know-how and expertise to enable the development process to be carried out effectively is an indispensible ingredient, although capital alone cannot generate economic development. Capital accumulation may very well be regarded as the core process by which all other aspects of growth are made possible. The final goal of development programming is therefore, to find the best way to overcome this scarcity of capital and design the efficient and optimum rate of capital accumulation.[5]

There are three types of capital—physical capital, human capital, and monetary capital. Physical capital consists of plants and machinery, which are used to generate economic growth. Human capital is the skill that a worker develops. It may seem morally wrong or factually incorrect to speak of human beings as though they were just so many machines, but nothing moral or ethical is implied in discussing human capital. Much of what may be called consumption consists of investment in human capital. Direct expenditures on education, health, and internal migration to take

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[4]<u>Processes and Problems of Industrialization in Underdeveloped Countries</u> (New York: United Nations Reports, 1950), p. 69.

[5]Meier, p. 49.

advantage of better job opportunities are clear examples of investment in human capital. Earnings foregone by mature students attending schools and by workers acquiring on-job-training are examples too. Yet none of the latter (earnings foregone by mature students), enters into our national income or accounts. The use of leisure time to improve skills and knowledge is widespread and it, too, is not recorded. In these and similar ways, the quality of human effort can be greatly improved and its productivity enhanced. It could be contended that such investments in human capital accounts for most of the impressive rise in the real earnings per worker. Investment in human beings yields a return exactly as investment made in different enterprises.

There is a fiat paper money, which serves as a medium of exchange and a store of value. A stock of this kind of money is designated as monetary capital. In order to increase the other two categories of capital, physical and human, monetary capital is also needed. It is by increasing the supply of monetary capital and utilizing it for investment purposes that the stock of capital--both physical and human--can be augmented. Money capital--which is obtained through savings out of national income--cannot be increased simply by printing new notes. Consumption must be restrained so that a real savings are generated.

Sources of Capital Formation

The accumulation of capital in any developing economy requires the mobilization of an economic surplus, whether it is financed from internal or external sources. If investment is to increase, there must be a growing surplus above current consumption that can be tapped and directed into productive investment channels.

Different methods of financing capital formation will entail different institutional arrangements. For example, ploughing back industrial profits into investment would imply a different institutional framework from that of financing through taxation by the State. It should be recognized, however, that the process of capital formation involves three essential steps:

(a) An increase in the volume of real savings, so that resources can be released for investment purposes;

(b) The channeling of savings through a finance and credit mechanism, so that investible funds can be collected from a wide range of different sources and claimed by investors and

(c) The act of investment itself, by which resources are used for increasing the capital stock. Savings in this context is used to mean the part of the flow of income not spent on consumption or used to pay taxes in any period.[6]

Savings

Most of our national income is spent for consumption, that is, the aggregate purchase of consumer goods and services by all households in our economy. Any part of national income that is not consumed is defined as savings. Saving is equal to national income minus consumption. It may be agreed that there are three sources of savings in the economy. These are personal domestic saving, business saving, and government surplus. The sum total of these three sourses of saving is equal to total savings. These savings are the sources of all the money being invested in the economy.

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[6]Don Patinkin, Money, Interest, and Prices; An Integration of Monetary and Value Theory (New York: Harper and Row Publishers, 1965), p. 13.

Personal Domestic Savings

First, individuals and households save. It is this kind of savings that is known as personal domestic savings. This class of savings also helps in generating economic growth.

Business Savings

Second, business savings is the act of retaining a portion of profits within the firm. For simplicity, it is assumed that businessmen plough back their savings into their business in the form of physical capital. In this manner, businessmen help a great deal in promoting the economic growth of a nation.

An increase in the volume of real savings is of fundamental importance if a high rate of investment is to be achieved. This means that if enough savings is made, a sufficient sum of money will be raised for development with no long-run tendency towards general inflation since there will be greater productivity capacity. If demand increases less than proportionately, the prices of some goods may fall.

Government Surplus

The government budgets its expenditures for a specified period, usually one financial year. If government revenues exceed expenditures, there will be government savings in the form of a surplus. The surplus may be used for public investment in capital projects. It can also be returned to the economy through reduction of the government debt, which will provide investment funds to the private sector.

The Ability to Invest

Investment may be defined simply as the change in the capital stock, its increase or decrease within a year or some other period of time. This means that any individual investment that does not increase the amount of capital, such as the purchase of previously issued shares of stock by one individual from another, does not count as net investment for the nation. The amount of investment in any economy depends upon the ability to invest. In the economic of growth as formulated by Albert O. Hirschman, it is briefly stated that:

> The ability to invest is acquired and increased primarily by practice; and the amount of practice depends in fact on the size of the modern sector of the economy. In other words, an economy secretes abilities, skills, and attitudes needed for further development roughly in proportion to the size of the sector where these abilities are already required and these attitudes are being inculcated. For instance, in an economy with 1,000 plants, about ten times as many managers and engineers can be expected to be available for the manning of new managerial and engineering jobs that in an economy with 100 plants. More intangible factors, such as ability to promote new enterprises and to enlist cooperation for this purpose, the ability to perceive new opportunities and to act on them, may, in a first approximation, be supposed to be similarly related to their actual breeding ground. Therefore, the ability to invest is a coefficient v that, applied to the total income y_m of the economy modern sector.[7]

The importance of saving lies in the fact that it makes possible real investment--that is, the accumulation of capital goods.

This crucial step of mobilizing savings should not be confused, however, with monetary financing of investment. Monetary financing is differentiated from saving in that it involves the actual distribution of money to be used in either building of factories or any industry for economic purposes. The financing itself does not make real resources

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[7]Albert O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1970), p. 36.

available. In other words it must not be forgotten that the essence of financial institutions lies in their function as an intermediary between savers and investors. As one study of the role of financial institutions concludes:

> However poor an economy may be there will be a need for institutions which allow such savings as are currently forthcoming to be invested conveniently and safely, and which ensure that they are channelled into the most useful purposes. The poorer a country is, the greater is the need for agencies to collect and invest the savings of the broad mass of persons and institutions within its borders, such agencies will only permit small amounts of savings to retain liquidity individually but finance long-term investment collectively.[8]

It is therefore important to be clear on the various sources from which the necessary savings can be mobilized to provide the wherewithal for capital expenditure. From internal sources, an increase in savings may be generated voluntarily through a reduction in consumption; involuntarily through additional taxation, compulsory lending to the government, or inflation or finally by absorption of underemployed labor into productive work. From external sources, the financing of development may be met by the investment of foreign capital, restriction on consumption imports or improvement in the country's terms of trade.[9] Also, government can possibly enforce measures which compel people to raise funds to be used for investment in various enterprises. This can take the form of wartime rationing and consumption quotas which create a surplus which can be used for investment.

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[8] Edward Niven, Capital Funds in Underdeveloped Countries (London: Oxford University Press, 1961), p. 75.

[9] Ibid.

Foreign Sources of Capital

The financing of development may also be met by the investment of foreign capital, foreign aid, restrictions on consumption imports, or an improvement on the country's terms of trade. Whenever foreign capital is used in development, it is necessary for the country receiving such capital for investment to export more than it imports in the future so that it will have a favorable balance of trade; which will enable it to repay the amount borrowed for its development. Foreign aid is one of the major sources of capital formation. Foreign aid can be given in different ways, depending upon the agreement between the country giving the aid and the one receiving it. The moral obligation to help the developing countries, the threat to national security caused by the widening gap between rich and poor nations, the desire to win allies, and possibilities for expanding world trade have been cited as reasons for helping the developing countries with their development programs. The primary purpose of some of the developed countries' economic policy is to accelerate economic growth in developing countries on the grounds that poverty-striken nations can cause trouble that could affect the world as a whole.[10]

An example of this moral concern was expressed in the late President Kennedy's Inaugural Address. He stressed the moral obligation to help less prosperous people and said:

> To those peoples in hut and villages of half the globe struggling to break the bond of mass misery, we pledge our best efforts to help them to help themselves for whatever period is required--not because the communists

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[10]Benjamin Higgins, Economic Development, Problems, Principles and Policies (New York: W. W. Norton & Co., Inc., 1968), p. 576.

> may be doing it, not because we seek their votes, but because it is right. If a free society cannot help the many who are poor it cannot save the few who are rich.[11]

The developed countries have additional reasons for promoting development. Economically, the market for the goods of the developed countries will be expanded if the production of poor countries increases. Their improved efficiency and economic versatility will enable them to provide the developed countries with more, better, and cheaper goods, and the expanded flow of international trade will raise the incomes of all.

The function of foreign aid or technical assistance is two-fold. It can help fill gaps between the skill requirements implicit in development programs and the domestic stock of skills. It is also needed to strengthen and supplement a country's capacity to produce new skills via its educational system. This supply of technical assistance supplements both the stock and the flow. It also helps in the "take-off" which W. W. Rostow states:

> The take-off is the interval when the old blocks and resistances to steady growth are finally overcome. The forces making economic progress, which yielded limited bursts and enclaves of modern activity, expand and come to dominate the society, growth becomes its normal condition. Compound interest becomes built, as it were, into its habits and institutional structure.
>
> During the take-off new industries expand rapidly, yielding profits, a large proportion of which are reinvested in new plants; and these new industries, in turn stimulate, through their rapidly expanding requirement for factory workers, the services to support them, and for other manufactured goods, a further expansion in urban areas and in other modern industrial plants. The whole process of expansion in the modern sector yields an increase of income in the hands of those who not only save at high rates but place their savings at the disposal of those engaged in

[11]Ibid., p. 576.

> modern sector activities. The new class of entrepreneurs expands, and it directs the enlarging flows of investment in the private sector. The economy exploits hitherto unused natural resources and methods of production.[12]

In addition to the above quotation, Rostow observes that there are a great many new techniques in agriculture and industry. These new techniques are the results of commercialization of agriculture which in turn results in increasing the number of farmers who are prepared to accept the new methods and techniques are experiencing a rise in their standard of living. He recalls that the revolutionary changes in agricultural productivity are an essential condition for successful take-off; for modernization of a society increases radically its bill for agricultural products. From this, one of the main features of the take-off is an increase in the ratio of saving and investment to the national income from approximately five per cent to ten per cent or over.

The take-off is also meant to be a central notion in Rostow's scheme and it has received the most attention. Here attention is duly focused on the early phase of a country's economic development which may or may not result in a cumulative growth movement depending on the momentum that is gathered. It is certainly true that during this phase, considerable uncertainty prevails about the chances of success of the country in its efforts to join the developed countries. Where the requirement for social overhead capital is heavy, it may require an investment ratio higher to generate the take-off. In addition to the rise in the rate of productive investment, other features about the take-off are the development of one

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[12] W. W. Rostow, The Stages of Economic Growth (Cambridge: The University Press, 1960), pp. 7-8.

or more substantial manufacturing sectors with a high rate of growth, and the existence or quick emergence of a political, social and institutional framework to make use of the impulse to expansion in the modern sector. Such expansion will include trading with foreign countries and this will attract exchange of goods and services--imports/exports and services will in turn attract foreign exchange which renders or makes possible monetary transactions among countries of the world.

The Foreign Exchange and Trade Balance

The supply and demand for foreign exchange determine the foreign exchange rate within certain constraints imposed by the nature of the foreign exchange system under which the country operates. The exchange rate is determined by supply and demand of home currency in terms of foreign currency. Each transaction is two-sided, and sales are equal to purchases. Any change in the conditions of demand or supply reflects itself in a change in the exchange rate and at the ruling rate the balance of payments balances from day to day, or from moment to moment.

The constituents of the demand for foreign currencies in terms of home currency (or the supply of home currency coming into the exchange market) may be divided into four groups--Foreign currency may be required: (a) in order to pay for goods and services purchased from foreigners, or to make gifts to them, and to discharge obligations in respect to visible and invisible imports; (b) in order to make loans or purchase securities abroad; (c) for speculative purposes, that is to say, in order to take advantage of an expected reversal in the future course of the exchange rate and (d) in order to remove funds from a country in which political, fiscal or business prospects appear threatened by political or economic difficulties.

The most interesting aspect of the world transactions today is the coverage. The balance of payments covers transactions between residents of a given country and foreign residents. It is noted that foreign transactions are limited to exchanges of national currency for foreign currency. It is, therefore, most convenient to deal with two major categories in the balance of payments--that which affects exports (payments for the exports which show or is shown as a debit--this is known as a means of payments for the imports that a country has involved). Imports might be paid for also out of an increase in liabilities to foreigners, or by reduced claims on foreigners (both recorded as credits).[13] On the whole the major functions of the foreign exchange are to effect transfers of purchasing power and to provide credit for foreign exchange risks. Of these, by far, the most important is the transfer of purchasing power from one country to another and from one currency to another. In a broader sense, a country pays for its imports with its exports. Exporters in a given country receive payments in domestic currency from the country's importers, who thereby pay domestic currency for their purchases from abroad. Goods and credit instruments move across the borders, but payments in domestic currency takes place within the country as part of the clearing process.

The Role of Government

Another matter of crucial importance is the role of government in the creation of economic infrastructure, such as basic installations and facilities, including port installation, on which the continuance and

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[13]Charles P. Kindleberger, International Economics (Homewood

growth of a community is dependent. The government is also bound to take responsibility for social infrastructure, particularly those connected with rapid urbanization. Schools, hospitals, sewer, transportation, roads, communication systems and water supplies are facilities which government must provide if the transition of society from that of an essentially primary-producing economy to a more advanced economy is to take place smoothly. Government also has to make a contribution to capital formation by increasing public savings and stimulating private savings. It does not follow from this, that the government emerges as an all-powerful authority. However, government certainly has to assume many new tasks which go far beyond the maintenance of law and order, which was the characteristic role assigned to government in the nineteenth century and in the early twentieth century.

Taxation

The problem of capital formation in the underdeveloped economies, as it confronts public finance, breaks down into three main parts. The first concerns the financing of social overhead investment which must be undertaken directly by government. The second deals with an intermediate area in which the actual investment projects are in private hands but the funds are made available through government finance. The third deals with the necessary incentives to private investment, both domestic and foreign as they are influenced by taxation and other fiscal measures. In all three categories, government effort is directed towards maximizing savings, mobilizing them for productive investment and channeling them

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Illinois: Richard D. Irwin, Inc., 1968), p. 342.

so as to serve the purposes of a balanced development program.

The pressing need for large government outlays for economic development strongly influences the approach to the problem of determining the appropriate level of taxation in an underdeveloped country. In a highly developed economy, tax policy tends to accept thelevel of expenditures as its revenue goal (modified, of course, by considerations relating to the levels of employment, prices and economic activity). The sequence of decision tends to run from expenditures to taxes. But in developing countries the level of expenditures depends much more heavily on the ability of the tax system to place the required revenues at the disposal of the government. By the same token, the size of the governments development program depends on the economic and administrative capacity of its tax system to marshal the necessary resources. In this sense, the sequence of decision tends to run from taxation to expenditures.[14]

Recognizing the strategic importance of an adequate flow of tax revenue the governments of many developing countries have sought to increase the proportion of national income collected from taxes. They have increasingly sought technical assistance in the area of tax reform. Underdeveloped countries are under no illusion that they can or should push their tax ratio of 10 to 15 per cent of national income to the 30 to 40 per cent levels reached in advanced countries such as Austria, Belgium, Germany, the Netherlands, United States and United Kingdom. But they are aware that even a modest increase in taxation may be able to finance a large increase in a government's contribution to the

[14]Meier, p. 190.

development program. A country in which the share of the government sector in the gross national product is 12 per cent may be taken as fairly typical of low-income countries. If one assumes that not more than one-third of the government's revenue is devoted to economic development, an increase of only two per cent points in the ratio of taxes to national income (to 14 per cent) would enable the government to increase its contribution to development expenditures to five per cent.

Planning

In economic development, it is commonly understood that planning, and more generally good and intelligent economic management, can improve the performance of an economy, particularly with respect to capital formation and to the balance of payments. Today most economists would agree that planning is essential in making a development effort fully effective. Planning involves some stock-taking, to see where an economy stands, what resources are readily available and what resources are likely to be available in the future. It also involves a deliberate attempt to explore systematically what is likely to constitute the most effective use of those resources. All these things have come to be accepted as ingredients of the planning process, as a task of any responsible government, irrespective of the country's political orientation. Planning is basically said to be the system by which things are set in an orderly fashion so that they may be carried out systematically.

The Role of Foreign Companies

One of the greatest problems in economic development is the difficulty of financing projects which any people decide to be necessary.

Often, it is not possible to undertake such projects, due to a lack of sufficient funds. Sometimes, when started, projects may not be completed even though they are vital for overall national economic development. For such projects, it becomes incumbent upon the government to look for ways and means of financing them. Usually, governments in developing countries have had to rely on foreign companies for indispensable projects which their nations, unaided, cannot carry out. This section is devoted to examining the part that foreign companies may play in such circumstances.

Indeed, foreign companies do render or undertake much of the financing of economic development in most developing countries. This may be done by means of foreign participation in an investment program in the form of either equity or loans. This is so important that it must be regarded as essential to countries seeking to promote industrialization.

Developing countries usually have a shortage of foreign exchange because they are superimposing a heavy program of capital goods imports on the normal import program. At the same time these countries normally suffer from inflationary pressures, as local productive resources are diverted to capital investment and attempts are made by the government to curtail imports of consumer goods. Foreign companies' financial participation has a beneficial effect on both of these problems. It provides capital equipment and it indirectly operates in an anti-inflationary way by permitting more of the existing foreign exchange resources to be used to bring in consumer goods to lessen the pressure on prices. These advantages are unique to foreign companies' participation and they are of such significance that they alone may make possible accelerated investment while maintaining economic stability.

The foreign companies also provide developing countries with technical know-how and experts who are expected to assist in various aspects of economic development. They further help to facilitate the establishment of other industries by providing a product or a service essential for further industrialization or by creating a market for other manufactured goods. They deal with the training of labor and management, thereby relieving what may be a serious shortage impeding economic development in the country. Foreign companies also encourage domestic production of new raw materials by providing a profitable market for them. They create competition in the market and this action compels other enterprises to produce, thereby providing consumers with a wider range of products. The continuity of supply of an essential product is assured by them too.

Some of the companies have gone well beyond the limit of their immediate interest. For example, they have set up, equipped, and run schools in less developed countries at primary and intermediate levels and have launched substantial community projects. They have built hospitals and trained the necessary staff. In some instances, the facilities created have been handed over without charge to the national authorities.

The major motivation for this activity (training, financial aid, building of factories and exploration of petroleum, etc.,) by these companies is naturally for the purpose of economic development. It is because of this that the governments of some of the developing countries do all they can to encourage most of these companies by removing most of the taxes that could be levied on the companies locally. For example, most sites or land that foreign factories are built on went to them as free leasehood in order to encourage investment by the respective companies.

Summary

This chapter has dealt with important issues in economic development. Economic development has been defined as the process whereby the per capita income of a country increases over a long period of time. But this is not all. Economic development includes the change from an agricultural society to an industrial one and a period of change, growth, wealth, and betterment.

To increase the quantity and quality of factors of production crucial to the development process, monetary capital can be obtained by savings in different ways. Personal domestic savings is one source of capital for development. Business savings is another source of capital accumulation. Capital can be increased through taxation by the state. Foreign investment is an additional source of capital formation.

Government can do much to aid development. One important responsibility is the creation of infrastructure. This is the manner by which government makes basic installations and facilities on which the continuance and progress of a community, region, state, etc., is dependent. It is the duty of the government to build bridges, construct roads and maintain the link of communications in its areas of jurisdiction. Government also has to make a contribution to capital formation by increasing public savings and stimulating private savings. In some of the developing countries, for example Nigeria, the government has undertaken a number of projects to accelerate economic development particularly in the area of industrialization. The most important of these industries is the petroleum industry.

The actual drilling and other exploration jobs have been undertaken by foreign oil companies. The government's role is to see that the foreign companies have carried out their day-to-day drilling operations responsibly.

In Chapter III, a short history of the petroleum industry and its present state will be treated. A detailed discussion will be made in various aspects that are concerned with the petroleum industry in Nigeria. Those affecting concession and exploration licenses to different companies will also be discussed. It should be noted that the Federal government is the sole authority in the granting of these licenses. The state governments cannot question the oil companies on these matters. The acquisition of concessions by the companies really entitled individual companies to exclusive rights in the areas where they did the drilling.

Various tables that substantiate the concession and exploration licenses will be displayed in their respective places. The present state of crude oil production and exploration in the country will be examined. The chapter will further examine the governments negotiation and participation in the oil industry. The revenues and expenditures of the oil industry will be discussed in conjunction with tables showing the amount of revenue made within any given period. The discussion on revenue will also focus on the balance-of-payments impact of the oil industry in Nigeria. The chapter will end with information concerning the employment of Nigerians and expatriates by the petroleum industry in the country.

CHAPTER III

THE ROLE OF THE PETROLEUM INDUSTRY IN THE DEVELOPMENT OF THE NIGERIAN ECONOMY

Introduction

In Chapter II, factors that govern economic development were set forth. Basic definitions of economic development, factors of production, capital accumulation and development, sources of capital formation, the role of government, and other factors that could assist economic development were explained.

This chapter gives a short history of the petroleum industry in Nigeria. It shows the distribution of concession areas to the respective companies and the position of petroleum in the external economy of the country. In a broader framework the chapter explains the Federal government's negotiation and participation in the oil industry, the tax revenue from royalties, the impact on the balance-of-payments, the distribution of oil revenue among the twelve states and the Federal government and the number of Nigerians employed in the industry and the nature of their jobs.

The Effect of the Theory in Chapter II

It has been stressed in Chapter II that savings, investment, capital accumulation and other economic factors contribute immensely to the development of a nation. With this aim in mind, the analysis of various data contained in Chapter III is designed to give vivid illustrations of the means by which these economic factors can assist a nation in becoming viable.

In Chapter II, there was a detailed discussion on the role of foreign companies in a developing country. The history of the oil industry in Nigeria is a striking example of the impact that foreign companies can have. The Federal government granted concessions to oil exploring and producing Nigerian companies in order that these companies would boost the economy of the country. The concessional licenses acquired by the respective companies authorized them to search vigorously for crude oil within certain restricted areas.

The actual benefit of foreign companies will be clearly shown in this chapter. The oil industry can provide developing countries with foreign exchange. Here some data have been included which illustrate foreign exchange earnings and explain the part that it plays for the development of a nation. The data show the impact on the balance-of-payments and the revenue that the petroleum industry brings to the Nigerian economy. In most cases, it will be seen that an export-oriented industry like petroleum, requires clear data to show the quantity of the exportation made to customers in different parts of the world. In this sector the part that the oil companies actually play in Nigeria for the development of its economy, and training of Nigerians in various areas of the industry will also be discussed. The Shell-BP Development Corporation has taken the responsibility of establishing technical schools in different sectors of the industry. But this is not all. The company awards scholarships annually to its deserving employees, and to the children of its employees to study overseas in various institutions.

It is helpful at this stage to deal briefly with the history of oil industry in Nigeria in order to appreciate the part it has played in the development of the country.

History and Present State of Petroleum in Nigeria

The Shell-BP or Shell-DA'arcy Petroleum Development Company of Nigeria, an affiliate of mineral oil companies Shell-Petroleum Company and British Petroleum Company, acquired the first mineral oil concession from the English Colonial Government in 1938.[15] It was negotiated as an oil exploration license for the entire mainland of Nigeria, which comprised 347,000 square miles.[16]

Geological and geophysical investigation in the following years, interrupted by the second World War, showed that the most favorable oil-yielding structures lay in the region of the southern Nigeria sedimentary basin. In 1951, therefore, Shell-BP limited its oil exploration license to a 58,000 square miles area in southern Nigeria which stretched from the eastern border of Dahomey over the Niger Delta to the British Cameroons. In 1955 and 1957 further restrictions on concession territory occurred as a result of findings from deep well drilling. From the reduced concession area of 1951, on January 19, 1955, Shell-BP chose another

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[15] "Search for Oil," in Nigeria Trade Journal III (July/September 1954): 913.

[16] The Shell-BP Story, Shell-BP Petroleum Development Company of Nigeria, Ltd., (Port-Harcourt, 1965), p. 10.

16,000 square miles which contained 20 oil prospecting licenses. The license area was therefore reduced to about 40,000 square miles. As Figure 1 shows, the concession areas of Shell-BP were concentrated in the Niger Delta. After the expiration of the prospecting licenses, which are limited by law to five years, there followed Shell-BP's most recent site selection. On January 1, 1960, and January 1, 1962, 46 oil mining leases were obtained over an area of 15,000 square miles. Having no competitors, the Shell-BP Petroleum Development Company of Nigeria was able to select 15,000 square miles from the 357,000 square miles in the 1938 concession area. The areas it chose included those with the best geological indications for the formation of crude oil deposits. Its monopolistic position in the past with respect to license selection affords Shell-BP both now and in the future a position of dominance in the development of the Nigerian mineral oil industry. This strong position has resulted from intensive activities in the investigation of a geologically unexplored territory with unfavorable physical conditions and a rather poorly developed infrastructure. By mastering Nigeria as a new territory for mineral oil supply as well as by the opening of mineral deposits with modern equipment and advanced methods not employed heretofore, the company performed the function of an entrepreneur according to Schumpeter's meaning. In Schumpeter's view,

> The sole distinguishing characteristic of the entrepreneur is that he is an innovator. By forcing the means of production into new channels, he provides the economic leadership that spearheads discontinuous dynamic change.[17]

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[17] Irma Adelman, Theories of Economic Growth and Development (Stanford, California: Stanford University Press, 1961), p. 101.

The above qualities of an entrepreneur in Schumpeter's view were the similar efforts undertaken by Shell-BP in initiating oil exploration and production in Nigeria.

The Derivative Selection of Concession by the Newcomers

The extremely promising result of the investigatory work of Shell-BP evoked a display of interest in the Nigerian crude oil economy by other mineral oil companies. These newcomers were able to obtain concessions only in those areas which the original licensee, Shell-BP, had abandoned. Therefore, they had to limit themselves to site choices in the areas which, at least from the viewpoint of Shell-BP, were less favorable with respect to the possibility of mineral oil yield. On the other hand, the risk of the enterprise by the new oil companies was decidedly decreased by the extensive preliminary work already carried out.[18]

The first company which took part in the search for crude oil in Nigeria after Shell-BP was Mobil Oil Company. In 1955, this company obtained an exploration license encompassing all of the abandoned Shell-BP territory of the Northern Region, including that portion of the British Cameroons administered by the Northern government (281,782 square miles). Two years later there followed a concentration upon a 12,700 square mile area in the sediment basin of Sokoto in the Northwestern part of the country. In 1957 Mobil obtained still another oil exploration license of about 4,000 square miles in the Western Region. This area stretched from the Western border of Nigeria along the coast to roughly 158 miles

[18] Annual Abstract of Statistical Reports 1961, Federal Office of Statistics, 1961, Vol. 2, p. 24.

east of Lagos. The company returned both concessions to the government after the expiration of the licensing contract on March 1, 1961. The return of these concession licenses by Mobil was due to the fact that their geological and geophysical investigations, in addition to the three wells drilled in the Western Region, had no promising results.[19]

Since Shell-BP converted only a third of the surface of their oil prospecting area into mining leases in 1960 and 1962, respectively, it became possible for the newcomers to share in the prospecting in promising areas of Southern Nigeria. The first company to obtain a prospecting concession was Tennessee Nigeria, Inc., an affiliate of the American Tennessee Gas Transmission. On April 1, 1960, September 30, 1961, June 14, 1962, and May 29, 1965, this company obtained six prospecting licenses covering an area of 6,863 square miles. Tennessee returned more than three-quarters of these areas to the government after the expiration of the prospecting concessions. However, it exercised its right under oil prospecting license No. 28 to convert 64,000 acres of the licensed area into an oil mining lease.

On December 1, 1961, and June 14, 1962, the Nigerian/Algerian* Governments granted Nigerian Gulf Oil Company (an affiliate of Gulf Oil Company) three prospecting licenses having a combined area of 3,965 square miles. On June 14, 1962, the Nigerian/Algerian Government investment

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[19] Annual Reports of Mine Department, Lagos: Government Printer, Printing Division, Vol. 9, pp. 8-10.

*Joint Investment Between the Nigerian and Algerian Governments in the oil industry. The oil company is named Nigerian/Algerian Pioneer Oil Company, Ltd.

Pioneer Oil Company, Ltd., (AGIP), an affiliate of the Italian government owned company obtained a land prospecting license of 2,031 square miles. Societe Anonyme Francaise des Ercharches et d' exploration p'etrole Nigeria Ltd., (SAFRAP) obtained extensive territories with two oil exploration licenses of about 16,000 square miles and five prospecting licenses of 9,112 square miles inclusive. In this company (SAFRAP) Nigeria Ltd., has 50 per cent interest, Regie Autonome des petroes (RAP) owns 40 per cent, and Societe de gession de patricipations de la RAP (SOGERAP) owns 10 per cent. In SAFRAP and RAP the capital share of the French government amounts to 64 per cent and 10 per cent, respectively.[20]

On April 1, 1965, Phillips Petroleum Company secured a 1,404 square mile concession territory which had been surrended by Tennessee. Thereupon Phillips acquired a 50 per cent interest in oil prospecting license No. 34 of AGIP Oil Company. Finally, two oil prospecting licenses covering an area of 58,930 square miles were granted to Esso exploration company on November 16, 1965.

The obvious interest of the international oil companies in competing for concessions in the Nigerian terrian made it possible for the Federal government to dispense licenses for the continental shelf. The government designated the coastal waters to a depth of 183 meters, the so-called 100 fathom line as the boundary for such licenses. The option consisted of 12, approximately 1,000 square mile concession blocks which embraced the entire coastal region from the border of Dahomey to the Delta of Cross

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[20] A. D. Basin, The Nigerian Coalfield Section 1, Bulletin No. 6 (Lagos, Nigeria, 1956), p. 28.

River. The breadth of the plots varied from nine to 13 miles on the west coast of Nigeria to 30 to 40 miles in the east. In December 1961, Shell-BP Development Company obtained four lots and Gulf Oil, Mobil Oil, and American Overseas Petroleum Ltd., two lots each at a price of 10,000,000 Nigerian naira ($15,000,000 U.S.) per concession. On April 1, 1964, Gulf Oil extended its concession blocks. Until 1966, the government had not succeeded in finding a taker of concession for the lot bordering on Dahomey since geological indications there had been judged unfavorable for productive crude oil deposits.

There is a decisive difference between granting of concessions on the continental shelf and selection of license territory on the mainland. While Shell-BP Petroleum Development Company could obtain optimal concession territory on land without the interference of competitors several mineral oil companies were simultaneously competing for the shelf. Thus, the advantage Shell-BP has over the newcomers in the selection of oil-yielding territory now lies exclusively on their more extensive knowledge of the total structure of the Nigerian sediment trough, which came about from their intensive investigations on the mainland.[21]

Table 1 shows the disposition licenses on the continental shelf and on the mainland from 1961 to 1966. It also shows the entire concession area of over 120,000 square miles (on April 1, 1966). Esso Oil Company and SAFRAP Nigeria Ltd., with roughly 59,000 and 25,000 square miles, respectively, possessed more than two-thirds of the license

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[21]F. J. Pedler, Economic Geography of West Africa (London: Longmans Green Company, 1955), pp. 20-31.

TABLE 1

OIL CONCESSIONS IN NIGERIA 1961-66 (N SQUARE MILES)

Companies	Oil Exploration License			Oil Prospecting License			Oil Mining Lease			Total Concessions			Date
	Main-land	Cont. Shelf	Total	Main-land	Shelf Shelf	Total	Main-land	Cont. Shelf	Total	Main-land	Cont. Shelf	Total	
Shell-BP Petroleum Company of Nigeria	-	-	-	-	3906	3906	14992	-	14992	14992	3906	18898	12-1-61
Mobil Exploration Nigeria, Inc.	-	-	-	-	2025	2025	-	-	-	-	2025	2025	12-1-61
Tennessee Nigeria Inc.	-	-	-	1380	-	1380	1987	-	1987	3367	-	3367	9-30-61
Nigerian Gulf Oil Co.	-	-	-	3965	2890	6855	-	-	-	3965	2890	6855	12-1-61
American Overseas Petroleum Ltd.	-	-	-	-	1931	1931	-	-	-	-	1931	1931	12-1-61
Nigerian AGIP Oil Company Ltd.	-	-	-	2031	-	2031	-	-	-	2031	-	2031	6-14-62
SAFRAP (Nigeria)Ltd.	16207	-	16207	9112	-	9112	-	-	-	25319	-	25319	6-14-62
Philips Petroleum Company	-	-	-	1401	-	1401	-	-	-	1401	-	1401	4-1-65
Esso Exploration Inc.	58930	-	58930	-	-	-	-	-	-	58930	-	58930	11-16-65
Total	75137	-	75137	17889	10752	28641	16979	-	16979	11000	10752	120757	

Source: L. H. Schatzl, Petroleum in Nigeria.

territory. Shell-BP Company had acquired nearly 19,000 square miles and Gulf Oil Company considerably less with 6,855 square miles of license territory. Compared with these four companies, Tennessee with 3,255 quare miles; AGIP, Mobil and American Overseas each with approximately 2,000 square miles and Phillips with 1,400 square miles had much smaller shares of the concession territory. Obviously the quality and value of the concessions is of far more importance than their sizes. The object of investigation, therefore, must be the nature of the concessions.[22]

The Quality of Concessions

The quality of concessions is important as an indication of the state of development of an oil company. If the company possesses only oil exploration licenses, it is in the position of short term analysis of expected crude oil yield in its concession territory. With the conversion of the exploration licenses into an oil prospecting licenses, the company is able to undertake more detailed geological and geophysical investigations as well as the drilling of deep wells. If deposits of crude oil are discovered, test production can be begun. When a company obtains oil mining leases, it has reached the stage of crude oil production.[23] The analysis of the oil concessions in Table 1 shows the dominant position of Shell-BP in the opening up of Nigerian crude oil production. Apart from oil prospecting licenses on the continental shelf, this company possesses only mining leases. Most other holders of con-

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[22]Pedler, p. 34.

[23]L. H. Scharzl, Petroleum in Nigeria (Ibadan: Oxford University Press, 1969), p. 7.

cessions hold prospecting licenses partly on the mainland and partly in the coastal waters. To judge by the present state of investigatory work, they will all convert a part of their prospecting licenses into mining leases after the expiration of their prospecting licenses. SAFRAP and Esso are the two companies that still hold exploration licenses for mainland areas of over 16,200 square miles and 58,900 square miles, respectively. The difference in licensing areas shows that SAFRAP is just at the beginning of a search for crude oil in two-thirds of its concession areas while Easso has so far only acquired oil exploration licenses.

The Role of the Oil Industry in the Nigerian Economy

The theoretical aspects and processes by which foreign companies generate income and development have been examined in Chapter II and these concepts will be applied in the case of the production of crude oil in Nigeria. The quantity and quality of oil production at any given period depends ultimately upon the levels of petroleum output in the country. Therefore, two projections of present and future levels of Nigerian crude oil production and exports are made; one is somewhat conservative and the other quite optimistic. These projections provide the basis for speculative analysis of possible medium-term impacts of oil on the Nigerian economy.

Impact of Oil Production on the Nigerian Economy

Confusion among the Nigerian leaders as to what would be the potential benefits from the petroleum coincided with the eruption of another in a series of recurrent political crises. Civil war erupted as the result of the secession of Eastern Nigeria in May 1967. This secession made conditions in the industry very uncertain. The civil war indeed disrupted the activities of the oil companies. Some of the companies were not sure which government they were to deal with in order to avoid being accused of partisanship. The Nigerian governments in turn were not sure whether the companies would continue to function in the country because of the civil war. Moreover, during the meeting of the head offices of the petroleum companies held in Lagos in 1967, there were different opinions as to whom the royalties and other payments should be made because the secessionist government asked the oil companies to make payments to it since the crude oil drilling was in its territory. This state of affairs in the country actually affected the levels of Nigerian crude oil output.

The uncertainty on the part of the oil companies was removed when the Federal government finally won the civil war. At this point, the companies decided that the output on the crude oil should depend on consumers demand. Among the most important discussions and projections during the meeting of the companies were international demand for petroleum products; political and economic outlooks in all producing countries; production costs and return on capital within the company's vertical integrated framework; financial arrangements with the government and expectations regarding their stability; and special features pertaining to crude oil production in the area (e.g., location and crude oil quality).

It was agreed that the buoyancy of international demand for petroleum products would probably continue. Attention thus centered on head office ideas of relative acceleration of output in various producing areas. On the whole, the international petroleum industry was optimistic about prospects in Nigeria, the recent civil war and the changes in financial arrangements with the government notwithstanding. These negative factors seem to be more than compensated by Nigeria's special advantages (e.g., location, crude oil quality), The industry has thus undertaken a rapid re-entry into those parts of Nigeria in which production activity was precluded by the civil war. Unlike most other private foreign investors, the oil industry seems to be nearly immune to the usual considerations of investment climate. Civil war did not even interrupt crude oil production completely in the areas where it had already begun.

Table 2 sets out historical data and two alternative projections for production, exports and local sales of Nigerian crude oil. The inability to obtain official figures for oil production and revenue in the year since 1968 from the Ministry of Mines and Power in Lagos, Nigeria has necessitated the use of estimated figures as an alternative. The actual published figures from the Journal of Economic Development in Table 4, are the latest published revenue figures--Total 655.13 Nigerian Naira. Pearson's high estimate totaled 560 Nigerian Naira during the period 1971-72. The difference between the published figures and those estimated by Pearson is 95.3 million Nigerian Naira. The difference was caused by an increase in the price of crude oil because of the war which affected the production of crude oil in the Middle East. In addition, to that the increase in the quantity of poduction in Nigeria was also responsible for the difference. Such an increase is indication that the growth of crude oil development will in the near future be rapid and remarkable.

TABLE 2

PETROLEUM PRODUCTION, 1963-73

(Volume in thousand barrels per day; value in million of Nigerian naira)

Volume	1963	1964	1965	1966	1967	1968
Production	76	120	270	415	317	142
Exports	76	120	266	383	300	142
Local Sales	-	-	4	32	17	-
Value Production	20	32	69	100	77	37
Exports	20	32	69	92	72	37
Local Sales	-	-	1	8	5	-

PROJECTIONS

Production		1969	1970	1971	1972	1973
Volume Production	Low	540	1,050	1,240	1,525	1,800
Exports		540	1,023	1,214	1,486	1,758
Local Sales		-	27	36	39	42
Volume Production		133	275	325	395	465
Exports		133	266	313	382	451
Local Sales		-	9	12	13	14
	High					
Volume Production		540	1,200	1,575	2,000	2,400
Exports		540	1,175	1,539	1,961	2,358
Local Sales		-	27	36	39	42
Value Production		133	313	406	513	616
Exports		133	304	394	500	602
Local Sales		-	9	12	13	14

Source: Scott R. Pearson, Petroleum and the Nigerian Economy.

*Figures for 1969-73 were estimated.

Underlying the projections was an assumption that the existing financial arrangements between the petroleum companies and the Nigerian government would remain unchanged throughout the period under consideration. The high projection assumed that the industry would expand very rapidly in Nigeria, whereas the low projection was based on a somewhat more conservative growth outlook. The head office of the petroleum exploring and producing companies make production plans for a minimum of five years ahead. The precise annual levels of output under both projections are aggregations of individual company plans. Although it is true that company head offices alter their plans periodically, the general orders of magnitude of these projects seem reasonable.

The low projection works out to a tripling of the July 1967 level by 1973. Alternatively the high projection foresees a quadrupling of this average output in the same time span. Production averaged less than 150,000 barrels per day during 1968, but began to recover towards the end of that year. Owing to damage and interruptions caused by the civil war disturbances in some of Shell-BP's producing areas in the Eastern States and to marketing difficulties experienced by Gulf, production levels fluctuated somewhat during 1969, reaching a low monthly average of about 450,000 barrels per day in August. Production in July 1967 was 6,000,000 barrels per day. The annual average is provisionally estimated as 540,000 barrels per day for that year. Following the end of the war in January 1970, output rose rapidly and surpassed one and a quarter million barrels a day in September 1970.

The Position of Petroleum in External Economy

The oil business accounts for overhalf of government revenue and some 80 per cent of foreign exchange earnings. It is expanding at a phenomenal rate and it draws to the city of Lagos new customers from nearly every country in the industrial world. Nigeria is either about to or has already eclipsed Libya as Africa's most important producer and it supplies nearly five per cent of the Western world's crude oil requirements. According to a recent publication, Nigeria has climbed to seventh position among the world's crude oil producing countries.[24]

Recent Development

Nineteen hundred seventy-three was the year in which the oil world went mad. In August 1973, the posted price of Nigerian crude oil was 2 naira per barrel ($4.29 U.S.). On October 20, in the same year, it was hiked to 4 naira per barrel ($8.31 U.S.), and then it rose to $14.69 a barrel on January 1, 1974 by Federal government decree (previous rises were made after consultation with the oil companies). The rise in price means that more U.S. dollars will be spent to get a sufficient quantity of crude oil for use in domestic and industrial purposes.

In addition the effect will be to triple royalty earnings and put at least $5,000 million more annually into the Federal Government Treasury than was anticipated as recently as last April's budget. Increased earnings are exciting and doubly welcomed in light of the drop in foreign

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[24]A. Johnson, Ebony Journal, 30 No. 1, November 1, 1974, p. 128.

exchange earnings from such traditional crops as cotton and groundnuts that will be experienced this year due to the drought and other factors beyond government control.

However much joy that will cause in the Finance Ministry, the Ministry of Mines and Power's chief interest centers on the continuing discussion concerning Nigerian participation in the industry. Last year saw the acquisition by the government of 35 per cent of Shell-BP's operations, paid for in cash, with a provision for 51 per cent participation by 1981. Table 3 summarizes the government's negotiation plans.

Meanwhile, there are other companies (excluding Texaco, which has a minimal production level) with whom participation agreements have yet to be concluded, such as Gulf and Mobil. The negotiations between the oil companies and the Federal government provide for government's participation in the exploration for oil, production, refining, transportation, etc; either on its own or in collaboration with suitable partners of its own choice. The most recent arrival, Ashland, has only been granted an exploration/production agreement with the Nigerian National Oil Corporation (NNOC). By this agreement, Ashland takes the exploration risk for which it is repaid in crude oil if oil is discovered. The government has not negotiated with Ashland as yet for participation because of its short period of involvement.

A year ago General Gowon opened Agip's new terminal at Brass. The terminal is connected by a 24-inch pipeline to the Agip/Phillips production fields and has a full potential capacity of 5,000,000 barrels a day when intermediate booster pumps are used. The problems of shallow drought and large tankers could only be satisfactorily solved by a

TABLE 3

GOVERNMENT'S NEGOTIATION AND PARTICIPATION PLAN

Companies	Government Participation (Per Cent)	Latest Production Million of Barrels	Exporting Through
Shell-BP	35	1.3	Bonny/Forc
Gulf	Negotiating	.4	Escravos
Mobil	Negotiating	.25	Qua-Iboe
Texaco	Negotiating	-	-
SAFRAP	35	.05	Bonny/Forc
Agip/Phillips	33½	.15	Brass
Tenneco	51	Prospecting	
Deminex/Niger Oil	51	Struck Oil	
DeltaPan Ocean	51	Drilling	
Japanese Petroleum	51	Struck Oil	
Occidental	51	Struck Oil	
Henry Stephen	51	Prospecting	
Ashland	Exploration/ Production Agreement Completed	Total 2.15 (Unofficial March 1974 estimate--2.25)	

Source: Eguwatu Okolo, Nigerian Economic Survey, Journal of Economic Development, March 1974.

single buoy mooring system. Accordingly the tank farm (capacity 1.9 million barrels) was linked to the buoy by a 26-km. marine pipeline which pumps at the rate of 60,000 barrels per hour.

The rise in prices of crude oil in the past year has had greater effects on revenue than any other year. The composition of revenue is given by the ministry of Finance. By far the greatest contribution comes from the petroleum profits tax. The 1959 Petroleum Profits Tax Act established the principle of 50/50 sharing of profits between the government and the companies. But in 1967, following the lead of OPEC, Nigeria amended the act, raising the tax to 55 per cent. Other features of the amendment included the 100 per cent extention of credit facilities to the companies for anything they may purchase, and the introduction of a modified method by which taxes and royalties are calculated. Although the amendment of the act has increased the profit tax, the companies were still in an advantageous position because of the provision allowing them to purchase on a credit basis.

The so-called fifty-fifty agreement of sharing profits shown above is considered an internationally recognized method of sharing profits. It is practiced by most crude oil-producing countries. In almost all oil-producing countries, however, the basis for assessing corporation profits tax is no longer, as in Nigeria, according to the Petroleum Profits Tax Ordinance of 1959.[25]

Table 4 shows the latest published figures in oil revenues for the period April 1971 to March 1972. This is an encouraging progress over 1963-68 period. The items and figures are shown in Nigerian naira. The total value of the amount shown in Nigerian naira is equivalent to U.S. $982.65 million. Recently some figures for estimated revenue in

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[25]L. H. Scharzl, p. 91.

TABLE 4

THE LATEST REVENUE PUBLISHED FIGURES APRIL, 1971/MARCH, 1972

Items	(Value shown in million of Nigerian Naira)
Premia	11.3
Royalties	147.6
Rent	15.4
Profits Tax	462.9
Custom Duty	15.2
Oil Pipeline	.03
Local Taxes	2.2
Others	.5
Total	655.13

Source: Eguwatu Okolo, Nigerian Economic Survey, Journal of Economic Development, p. 25.

1974 were published. Although these figures could not be verified officially, there seems to be some evidence of truth in them and therefore, they are worth quoting. The reports were that profits tax receipts rose to 520 million Nigerian Naira ($780,000,000 U.S.); royalties to 155 million Nigerian Naira ($232,500,000 U.S.); others 29 million Nigerian Naira and the total 704 million Naira ($1,077.12 million U.S.). Only last April the Federal Commissioner of Finance estimated 1973-74 petroleum revenue as 675 million Nigerian naira from the profit tax and 185 million Nigerian naira from royalties. These figures have been left well behind by the increases, and Nigeria will probably be earning around $2,000 million Nigerian naira this year. It should be noted that at the posted price of $14.69 the oil companies deduct $1.73 for royalties, and the balance of $12.96 is the normal price of crude oil per barrel.

Nigeria's uniform pricing arrangements, under which petrol is sold at the same price throughout the country, is subject to price control, currently fixed at 9.5k per litre of premium.[26] The seven marketing companies can make a profit at this price on Port-Harcourt refined products, but on imported petroleum, which attracts duty, they are sustaining a loss. The loss sustained has enabled the marketing companies to turn their attention to purchasing of the crude oil drilled in the country to be refined locally at Port-Harcourt refinery for sale to consumers within the country and other West African countries. As regards estimation in production, if an allowance is given for a slight increase in it over the next year, Nigeria will earn $7,000 million or above from its oil in 1974-75.[27]

One of the facts that government has not revealed is the amount at which its participation oil is sold. If the government sells it for at least $17 per barrel, this means that Nigeria crude oil is sold at an auction. Possibly, this oil could be sold for up to $22 per barrel if the government is serious about it. (The fact here is that the government does not make an official announcement of the price of the participation oil received from the companies). It is understood that the government also is asking for its royalty payments in the form of crude oil (at 10 barrels per 100 for off-shore production, 12½ barrels on-shore).

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[26] Eguwatu Okolo, Nigerian Economic Survey-Journal of Economic Development (Lagos, Nigeria, 1974), p. 27.

[27] Ibid., p. 23.

It is not clear whether the companies have granted the request made by the government. It must be understood that if the quantity of crude oil that the government is requesting from the companies is sold to independent dealers, the government could realize another amount up to $1,000 million on top of the estimated figure of $7,000 million or more per annum quoted above.

The main beneficiary of all this new wealth will of course, be the Federal government, the sole recipient of the profits tax. All off-shore royalties, calculated at 10 per cent of the posted price also go to the government, as does five per cent of off-shore royalties. Of the remaining 95 per cent, 45 per cent goes to the state of origin and 50 per cent is credited to the distributable pool account. Funds in this account are then distributed to all states on the basis of their population.

Petroleum Industry Revenue-Payment to the Government

The Nigerian petroleum industry contributes to public domestic saving and thus adds to investment resources for the Nigerian economy via large and increasing payments to government. Table 5 contains data for historical payments to the government by category as well as amounts that might be associated with the low and high projections given earlier in the chapter. Though the table is brief, the calculations underlying its content are long, tedious, and of insufficient interest to be included here. The numbers shown are aggregations of amounts calculated on a company-by-company basis, employing estimates of each producing company's output, costs, and capital allowances. The figures, however, show a decrease after 1967.

TABLE 5

PETROLEUM INDUSTRY PAYMENTS TO GOVERNMENT BY CATEGORY, 1963-73
(Million of Nigerian Naira)

Payment	1963	1964	1965	1966	1967	1968
Petroleum Tax	-	10	4	6	12	8
Royalties	4	4	10	16	30	6
Others[a]	6	10	14	16	14	20
Total Payments to Government	10	24	26	38	54	32

	1969*	1970	1971	1972	1973
			Low		
Petroleum Profit Tax	6	62	130	170	216
Royalties	12	42	66	82	98
Others[a]	28	32	36	36	38
Total Payments to Government[b]	46	136	232	288	352
			High		
Petroleum Profit Tax	6	80	170	230	312
Royalties	12	48	82	106	130
Others[a]	28	32	36	36	38
Total Payments to Government[b]	46	160	288	372	480

Source: Scott R. Pearson, Petroleum and the Nigerian Economy.

*The figures from 1969-73 were estimated.

[a]Rentals, customs and stamp duties, premium, and other taxes.

[b]May not equal sum of components because of rounding.

The importance of these accelerating payments to government is seen by its share in total government revenues. In Table 6 there is a comparison of petroleum and nonpetroleum revenues. There is no great faith attached to the projection of nonpetroleum revenues; it is relatively conservative and assumes that prewar levels are regained by 1971. If the low projection is used, 1973 total revenues are nearly 190 per cent of the 1966 peak, with oil revenues moving from one-tenth to almost one-half of the rising total. Alternatively, on the basis of the high projection during this same period, total revenues are more than doubled, and oil revenues increase to 55 per cent of the 1973 total.[28] From the data, it appears that the Nigerian government has made more from crude oil than from any other source of income. Revenues of these magnitudes will certainly provide increases in public domestic saving. This will affect future levels of government current expenditure.

To date the government has used the oil revenue to rehabilitate the displaced ex-service men and civil servants in the country. The government spends more also for the training of military personnel, and in payment of compensation and gratuities to ex-service personnel who were disabled during the civil war. The involvement of the government in the military is to keep the army personnel in a better condition and to improve on their condition of service so as to encourage them to give their best services to the country. The Federal Government does this because of its bitter experience in the civil war that has just ended.

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[28] Scott R. Pearson, Petroleum and the Nigerian Economy (California: Stanford University Press, 1970), pp. 100-111.

TABLE 6

THE IMPACTS OF PETROLEUM ON TOTAL GOVERNMENT REVENUE, 1963-68
(Million of Nigerian Naira[L] Except as otherwise indicated)

Revenue	1963	1964	1965	1966	1967	1968
Petroleum Revenues[t]	10	24	26	38	54	32
Nonpetroleum Revenue[u]	284	332	354	356	272	280
Total Revenue[u]	294	356	380	394	324	312
Petroleum Revenues as Per Cent of Total Revenue	3	7	7	9	17	10

THE IMPACTS OF PETROLEUM ON TOTAL GOVERNMENT REVENUES, 1969-73
(Million of Nigerian Naira Except as otherwise indicated)

Revenue	1969*	1970	1971	1972	1973
			Low		
Petroleum Revenue	46	136	232	288	352
Nonpetroleum Revenues	300	330	360	380	400
Total Revenues	346	466	592	668	752
Petroleum Revenues as Per Cent of Total Revenues	13	29	39	43	47
			High		
Petroleum Revenues	46	160	288	372	480
Nonpetroleum Revenues	300	330	360	380	400
Total Revenues	346	490	648	752	880
Petroleum Revenue as Per Cent of Total Revenues	13	33	44	49	55

Source: Scott R. Pearson, Petroleum and Nigerian Economy.
T- Calendar Year
U- Fiscal Year (Starting April 1)
L- $1 = .657 Naira
* - The figures from 1969-73 were estimated.

Nigeria also used its petroleum revenue to help its less fortunate neighbors. It gave a $3 million interest-free loan to French Dahomey, $75,000 to Zambia and over $32,000 will be given towards the WHO Appeal Fund for the drought-stricken Sahelian countries. This is in addition to $7.3 million previously donated in a genuine desire to help sister states. As seen by the above current expenditure, it is hopeful that the Nigerian government will be able to exercise prudence in its recurrent spending policies. The inability to make accurate and firm guesses about future government spending patterns allows no better conclusion other than that petroleum revenues should offer a tremendous potential for large and increasing contributions to public savings.

Balance-of-Payments Impact of the Petroleum

After supplying its own requirements, the petroleum sector furnishes adequate accounts of foreign exchange to the rest of the Nigerian economy. The balance-of-payments impact of the Nigerian petroleum industry, the amount of free foreign exchange supplied to other Nigerian sectors, can be estimated through the use of two approaches; one dealing with the industry's local currency expenditures and the other with international finance flows. These two approaches are employed in Tables 7 and 8 to calculate past and possible future balance-of-payments impacts of the oil industry.

The projection in Table 7 draws on forecasts made in the two previous sections as well as on an entry for proceeds from local sales. Local proceeds are determined principally by crude oil sales to the Nigerian refinery at Port-Harcourt; this includes also earnings from sales of natural gas and other incidental local proceeds. Table 7 relies on

TABLE 7

BALANCE-OF-PAYMENTS IMPACT OF THE PETROLEUM INDUSTRY, 1963-73: LOCAL CURRENCY EXPENDITURE (Million of Nigerian Naira)T

Payment	1963	1964	1965	1966	1967	1968
Payments to Government	10	24	26	38	54	32
Other Local Payments	20	28	46	66	54	26
Proceeds from Local Sales	2	2	2	18	16	-A

Payment	1969*	1970	1971	1972	1973
		Low			
Payments to Government	46	136	232	288	352
Other Local Payments	66	82	90	94	98
Proceeds from Local Sales	2	18	24	26	28
Balance-of-payments[b]	110	200	298	356	422
		High			
Payments to Government	46	160	288	372	480
Other Local Payments	66	94	112	118	124
Proceeds from Local Sales	2	18	24	26	28
Balance-of-payments impact	110	236	376	464	576

Source: Scott R. Pearson, Petroleum and the Nigerian Economy.

A--Amount less than 1,000,000 Nigerian Naira
b--May not equal sum of components because of rounding
T--$1 U.S. = .6 Nigerian Naira
*--Figures from 1969-73 were estimated.

TABLE 8

BALANCE OF PAYMENTS IMPACT OF PETROLEUM INDUSTRY, 1963-73, INTERNATIONAL FINANCIAL FLOWS
(Million of Nigerian Naira[T])

Payment	1963	1964	1965	1966	1967	1968
Proceeds from export sales	40	64	136	184	144	74
Imports of materials	8	24	28	40	28	28
Net factor income paid abroad	-A	2	28	38	38	-A
Net foreign capital flow	10	36	36	58	88	82
Balance-of-payments impact[b]	30	50	72	86	100	58

Payment	1969*	1970	1971	1972	1973
Low					
Proceeds from export sales	266	532	626	764	902
Imports of services	92	100	92	88	88
Imports of materials	46	50	46	44	44
Net factor income paid abroad	148	262	266	346	414
Net foreign capital flow	130	80	76	70	66
Balance-of-payments impact	110	200	298	356	422
High					
Proceeds from export sales	266	608	788	1,000	11,204
Imports of materials	46	54	58	54	54
Imports of services	92	108	116	106	106
Net factor income paid abroad	148	308	330	464	552
Net foreign capital flow	130	98	92	88	84
Balance-of-payments impact[b]	110	236	376	464	576

A—Less than 1,000,000 Nigerian Naira
b—May not equal sum of components because of rounding
T—$1 U.S. = .6 Nigerian Naira
*—Figures from 1969-73 were estimated.

projections of international financial flows associated with the petroleum industry, including entries for exports of goods and of services, net factor income paid abroad, and net foreign capital flows. As shown in Table 8, estimated foreign exchange earnings from petroleum in 1973 are over four times their 1967 level using the low projection and six times this level on the basis of the high projection. If the companies lessen direct imports through the use of local goods and services more revenue will be retained in the Nigerian economy.

It is sometimes believed that the balance-of-payments[29] impact plays a greater role in a country's transactions with the outside world. The payments made by crude oil companies to the Nigerian government really show an excess of sales over purchases during the period under review. In Table 9, it can be seen that the annual oil balance-of-payments impact will equal nearly one-half of petroleum earnings. Or what amounts to the same thing, the petroleum exploring and producing companies will bring about half of their export earnings back into Nigeria. Underlying the entry entitled "nonpetroleum exports plus net capital flows" is a forecast of all non-oil balance-of-payments entries except imports of goods and services and transfer payments. The most important assumption attached to this forecast is that the value of non-oil exports, will grow at an aggregate rate of three or four per cent per annum after 1969.

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[29]Balance-of-payments of a country is a statistical statement of all commercial and financial transactions carried on between the citizens and the government of that country and all other countries during one calendar year. It is a summary account of all selling transactions of a country abroad (credit) and of all buying transactions (debt) which indicates the changing economic position of a country in the World economy.

TABLE 9

BALANCE-OF-PAYMENTS IMPACT OF THE PETROLEUM INDUSTRY AS PER CENT OF PETROLEUM EXPORT EARNINGS, 1963-73
(Million of Nigerian Naira, except as otherwise indicated)

Payment	1963	1964	1965	1966	1967	1968
Balance-of-payments impact	28	50	72	86	94	58
Exports	40	64	136	184	144	74
Balance-of-payments impact as per cent of export	70	78	53	47	65	78

Payments	1969*	1970	1971	1972	1973
			Low		
Balance-of-payments impact	110	200	298	356	422
Exports	266	532	626	764	902
Balance-of-payment impact as per cent of exports	41	38	48	47	47
			High		
Balance-of-payments impact	110	236	376	464	676
Exports	266	608	788	1000	1204
Balance-of-payments impact as per cent of exports	41	39	48	46	48

Source: Scott R. Pearson, Petroleum and the Nigerian Economy.
*Figures from 1969-73 were estimated.

It may be useful to reconsider briefly what is to be gained from the foreign exchange within oil enterprises in Nigeria. Foreign exchange generated by the Nigerian oil industry measured by the petroleum balance-of-payment impact is net of all foreign exchange needs of the oil industry. This foreign exchange is thus available for use by the non-oil sectors of the Nigerian economy. At the same time, these other sectors generate foreign exchange of their own as shown in Table 9 by the line "exports plus net capital flows." Summing these two items gives the total amount of foreign exchange that is available to the Nigerian non-oil economy during a given period. This foreign exchange can be used to purchase nonpetroleum imports or to create foreign exchange reserves for further purchases.

The importance of the petroleum sector's contribution of foreign exchange can therefore be measured by comparing the balance-of-payments impacts of petroleum with the total foreign exchange availability or use during any given period. Referring to the low projection, foreign exchange availability regained its 1965 peak in 1969 and by 1973 it had increased to nearly three-fourths again as much as the 1965 level. The growth of foreign exchange under the high projection is even more pronounced; the 1965 peak level was also attained by 1969, but the 1973 amount was about twice as large as that of 1965. The importance of the contribution of foreign exchange to future Nigerian output should not be underrated because it contributes immensely to the enhancement of the Nigerian economy.

Employment in the Petroleum Industry

In Chapter I, the problem of training men for different sectors of the economy was discussed. Training creates new attitudes towards industrial employment, teaches individuals to take advantage of innovations that need little capital and to use the resulting gains to finance investment elsewhere. Using these criteria, we will examine the impact of employment and training that the oil companies have provided

TABLE 10

PETROLEUM INDUSTRY CONTRIBUTION TO NIGERIAN FOREIGN EXCHANGE AVAILABILITY AND USE, 1963-73
(Million of Nigerian Naira, except as otherwise indicated)

Item	1963	1964	1965	1966	1967	1968
Petroleum balance-of-payments impact	28	50	72	86	94	58
Nonpetroleum[a]	340	440	500	418	348	422
Total foreign exchange availability[b]	370	490	582	504	442	480
NonPetroleum imports of goods and service	454	524	564	526	516	498
Net transfer paid abroad[c]	6	-	-6	-4	8	-12
Net increase in foreign exchange and service	-90	-34	24	-18	66	-4
Total foreign exchange reserves	370	490	582	504	442	480
Petroleum balance-of-payments impact as per cent of foreign exchange availability or use	8	10	12	17	21	12

	1969*	1970	1971	1972	1973
			Low		
Petroleum balance-of-payments impact	110	200	298	356	422
Nonpetroleum[d]	460	500	530	550	570
Total foreign exchange availability[e]	570	700	848	906	992
Petroleum balance-of-payments impact as per cent of foreign exchange availability and use	19	29	36	39	43

TABLE 10--Continued

	1969	1970	1971	1972	1973
		High			
Petroleum balance-of-payments impact	110	235	376	464	576
Nonpetroleum[d]	460	500	530	550	570
Total foreign exchange availability[e]	570	736	906	1014	1146
Petroleum balance-of-payments impact as per cent of foreign exchange availability or use	19	32	42	46	50

Source: Scott R. Pearson, Petroleum and Nigerian Economy.

*Figures from 1969-73 were estimated.
a--Exports plus net capital flows plus errors and ommissions.
b--May not equal sum of components because of rounding out.
c--Dash indicates between +10,000,000 -10,000,000 Naira.
d--Exports plus net capital
e--Total foreign exchange availability equals total foreign exchanges used, which includes nonpetroleum impacts of goods and services net transfer paid abroad, and net increase in foreign exchange reserves.

for Nigerians.

Table 11 shows the levels of employment of both expatriates and Nigerians in the crude oil industry in Nigeria. As the table shows, over six hundred expatriates were employed in Nigeria by the international oil companies in 1967. Due to local political influence, as well as cost pressures, the companies have undertaken training schemes at all levels in order to employ local personnel as rapidly as possible. The Immigration Act of 1963 placed tight controls on the number of expatriates that the exploring and producing companies and their suppliers and con-

TABLE 11

LEVEL OF EMPLOYMENT IN THE NIGERIAN PETROLEUM EXPLORATION AND PRODUCTION INDUSTRY, MARCH 31, 1964-67

Employees	1964	1965	1966	1967
Total Employees	3,075	3,135	3,438	3,901
Nigerian Employees:				
Total	2,627	2,668	2,900	3,252
Management	74	6	16	16
Professional		85		141
Supervisory		39	534	465
Skilled labor	558	1,750	882	1,043
Unskilled labor	1,393[a]	-	898	969
Others	602	788	570	618
Expatriate Employees:				
Total	448	467	538	649
Management		31	39	47
Professional	301	280	-	379
Supervisory	147[a]	156[a]	495	185
Skilled technicians			4	38

Source: Scott R. Pearson, Petroleum and the Nigerian Economy.
a--Residual Category.

tractors could employ in Nigeria. The rationale for this policy was to force the industry to train Nigerians or to use already skilled local employees. The establishment of expatriate quotas has been the source of a great deal of misunderstanding and frustration for both the government and the companies. Table 11 shows some encouraging evidence concerning the rapid success of the Nigerianization policy.

In 1967, 622 Nigerians, nearly one-fifth of the 3252 Nigerian employees held high-level (management, professional, or supervisory) positions. This number was about equal to the total number of expatriates employed at that time. Comparative data are not available on specific high-level positions held by Nigerians and expatriates, so it is not possible to contrast the relative decision making responsibilities of the two groups.

There are basically three avenues through which the industry has trained and upgraded its Nigerian employees--scholarship, in-house training programs, and on-the-job training. Industry scholarships for course work at universities and technical institutions increased from 69 in 1962 to 333 in 1966. Smaller numbers of scholarships have been available for specialized secondary school training. By far the largest in-house training program was Shell-BP's training school at Port-Harcourt, which trained over 200 scholars as skilled craftsmen. The companies also have special internal courses for Nigerian employees. Often training is carried out constantly. Sometimes this is directed by special departmental trainers, supervisory employees whose major duty is training rather than line work.

Judging by the number of expatriates attracted by oil, there is little question that the petroleum industry has been a net supplier of trained manpower in the Nigerian economy. If only skilled Nigerians are considered, the point is not as clear. The extent of the petroleum sector's contributions of skilled labor to the non-oil sectors of the Nigerian economy is difficult to assess. Evidence of Nigerians who have been trained by the oil industry leaving to enter other industries or to establish new enterprises is limited to a few specific instances. On the whole, the establishment of the petroleum industry in Nigeria has resulted in a fairly significant upgrading of a very limited level of Nigeria's human resources. If, however, the Nigerian economy reaches a point where further growth is constrained by a lack of skilled manpower, it is highly doubtful whether the petroleum industry, in the course of its normal operation, would be able to do much about breaking this bottleneck.

In spite of the above statement, the latest complete figures on employment (March, 1971) show nearly 10,000 Nigerians to a little over a thousand expatriates (primarily white) employed by the Nigerian refinery, the seven marketing firms it services and exploration and production companies. The number of expatriates today is much lower. Although the above quoted figures are not included in the Table shown on page 60, there is much evidence of its reliability since it is published in EBONY of November 1974.

A Comparison of Population, Gross National Product, and per Capita Output of Nigeria with Two Other Agrarian Countries

A comparison of gross domestic product, its rate of growth and growth of output of per capita in Nigeria with two African countries which are purely agrarian will give some indication of the impact that petroleum has had on the total output of the nation. Gross domestic product in Nigeria as indicated by the figures in Table 12 has increased much more rapidly than those of Zaire and Zambia, the two countries under comparison. The growth in output per capita in Nigeria is also positive within the period under reference; whereas the other African countries have negative growth. An interesting aspect of the study of sectoral growth in Nigeria is the fact that expansion of the petroleum sector has caused growth in all sectors of the country.

TABLE 12

COMPARISON OF GROSS DOMESTIC PRODUCT, GROWTH RATE GDP, POPULATION AND GROWTH IN OUTPUT PER CAPITA 1970-72

Country	Gross Domestic Product (in million)			Growth Rate in GDP		Population Growth (in million)			Growth in Output per Capita (Percentage)	
	1970	1971	1972	1970-71	1971-72	1970	1971	1972	1970-71	1971-72
Nigeria	3209.6	3991.8	4469.8	24.4	12	55	56	58	22	8
Zaire	1026.2	1088.2	1029.7	4.1	-5	10	12	14	-12	-17
Zambia	1185.3	1106.2	1217.8	-17	10.1	9	11	12	-24	1

Source: United Nations Statistical Yearbook 1970-72.

Summary

In this chapter a short history of the petroleum industry in Nigeria has been discussed. The distribution of concessional areas to the respective companies has been examined. The Federal government's responsibility was to grant licenses of various capacities to all crude oil companies in the country on the basis of first-come-first-served. The Federal government participation in the crude oil exploration has been explained. In the external economy of the country, the petroleum industry has been able to attract foreign exchange into different sectors of the economy. It is of interest to note that the crude oil project has improved the balance-of-payments in the country's external trade. Aside from this, the industry has been making periodical payments to the Nigerian government in different categories. Table 4 explained in detail the payments made to the government by all companies participating in the crude oil industry. The Federal government, the main beneficiary of the oil wealth, gives 45 per cent of the amount paid to it by the companies to the states of origin of oil exploration. Fifty-five per cent of the funds paid to it is reserved to be distributed to all states on the basis of population.

The discussion in Chapter II explained the role of foreign companies in the advancement of developing territories. Here the role of foreign companies is seen by what Shell-BP and other oil companies are doing in Nigeria. These companies have established training schools in different parts of the country where they train Nigerians to become skilled technicians for work in their projects. Scholarships are awarded annually by the companies to their deserving employees for study overseas. This policy has worked well and enabled the companies to have more qualified Nigerians working in the oil industry. Table 11 showed the number of Nigerians and expatriates employed by the companies. The interest that the companies have in the training of Nigerians shows that in the future Nigerians will be able to work in almost every section of the industry.

A comparison of Nigeria's Gross National Product with two African countries which are purely agrarian indicates the impact that petroleum has had on the economic growth of the country.

CHAPTER IV

SUMMARY

In economic development, the role of foreign companies is eminent. Foreign companies sometimes act as financiers to developing countries in their economic development. They do undertake the responsibility of establishing industrial and agrarian projects in most of the developing countries. Some of them participate in development either in practice or by giving technical advice to the governments of developing countries. Foreign companies provide developing nations with experts and specialists who assist in various aspects in economic development. The companies have been the catalyst by which traditional agricultural countries are developed. In short foreign companies have been the instrument by which industrial and agrarian developments are promoted in most of the developing nations of the world. On this basis, the role of the foreign companies can be an excellent one in any sphere of economic development.

Prior to the discovery of crude oil in Nigeria, the basis of economic development was agriculture. But the development in agriculture alone was not sufficient enough to boost the economy of the nation. It was for this reason that the country was plunged into other economic activities that could assist the country because of their viability. It was on these grounds that in 1938 the search for crude oil was initiated by a foreign firm. The Nigerian Federal government granted this company a concessional license to explore or search for crude oil in the country. The company undertook a rigorous investigation of the prospects of obtaining crude oil in the country. All indications were that the most oil-yielding structures lay in the region of the Southern Nigeria sedimentary basin. This result compelled some of the companies to center their search in the areas where the investigation was conducted. Ultimately, there was a discovery of petroleum in commercial quantity. This discovery served as an incentive for Nigeria to look for funds with which the crude oil development could be launched. Eventually it was aided by foreign entrepreneurs and enterprises who participated in the crude oil development and investment.

In the initial stage of the development of the crude oil industry, the main product was kerosene with which lighting was made possible. Lubricating and fuel oil were by-products. In recent years, petroleum has been widely used all over the world in technical and scientific areas. It also assists in the efficient performance of domestic businesses. Its advances may be attributed to intensive research undertaken to find new and improved uses for crude oil.

The prosperity of Nigeria now is based on its exports of crude oil and agricultural commodities. It is through these exports that Nigeria obtains foreign exchange. Foreign exchange provides increased income and employment for Nigeria. It is clear that the oil industry has increased Nigeria's export commoditires more rapidly than it has increased imports. This is due to the fact that the industry makes use of more locally made materials in its daily operations than imported materials. The restriction on importation and the use of local materials have assisted in the improvement of the country's balance-of-payments. The balance-of-payments which includes not only payments made or received from such things as tourist and shipping services, also assists the economic growth of the nation. A study of the Nigerian balance-of-payments reveals much information about its economic status and development. For instance, a country with a large excess of exports over imports and with a large debit balance for interest and dividends is likely to be a mature debtor. Now Nigeria has been able to develop its resources with the aid of foreign capital and it is in the process of paying off its debts by means of an excess of exports of crude oil and other agricultural commodities.

The increasing returns from economic growth of the crude oil industry is remarkable. The recent improvement has been in the areas of manufacturing by-products such as chemical, plastics, synthetic rubber, etc. The new products have created new markets which bring additional revenue into the economy. The growth of the crude oil project is noted because of the enormous revenue that it has made which helps to enhance the economy of the nation.

In addition, it has been the avenue by which several Nigerians have been promoted to managerial and supervisory positions in the enterprise. Its role in improving the conditions of service of its employees is in keeping with the Nigerianization policy of the Federal government. The importance of this industry is not only seen in revenue performance and in the employment of Nigerians in its establishments alone, but is also reflected in its role in other sectors of the economy.

Aside from opening of trade schools to train its employees to become skilled technicians, it also awards scholarships to Nigerians for training overseas and within the country. But this is not all. In some instances, it has constructed good roads leading to different sectors of the country where its projects are operated. The maintenance of these roads is a sign of the eminence of this industry because it has provided social amenities which other sectors can utilize for their efficient economic performance. These pioneering activities of the crude oil companies are not to be forgotten in the annals of Nigerian economic development. In its endeavor to supply the energy needs of the nation, the oil industry has built a refinery in the country. This refinery is responsible for refining several barrels of crude oil per day and this is supplied to the masses at a reduced price for local consumption.

In the modern economy, planning plays a major role in economic development. Planning is an attempt to exercise forethought with reference to an economic operation and to anticipate the scope, character, and results of such an operation. Currently, planning refers to governmental direction of economic activity. The rapid growth of the crude oil depends upon efficient planning by both the companies concerned and the Federal government. Most modern economists maintain that efficient planning is responsible for healthy economic development in both the industrial and the agrarian sectors.

The establishment of the oil enterprise in the nation has brought foreign exchange into the economy of the country. It is by means of this foreign exchange that international transactions are met since this involves exchange of home currency with those of the foreign nationals. Foreign exchange has assisted the nation a great deal in its international trade and investment. Nigeria can now purchase any commodity it desires to use in its development since by the use of foreign exchange it can settle any outstanding debts. The crude oil companies also pay royalties to the Federal government for the exploration of crude oil in the country. The royalties paid by the companies also help to increase the oil revenue in the whole economy. This revenue is the main organ of the government's current expenditure in the nation, the system by which the entire oil economy could be developed in the nation. This industry has actually built the image of Nigeria in several ways. The companies have provided many educational opportunities for Nigerians to obtain industrial skills. It also constructed roads throughout the nation to link its major projects. The roads assist the development of other sectors of the economy. It strictly adhered to Nigerianization policy by promoting Nigerians to managerial and supervisory positions in the industry. The industry has recently appointed a Nigerian who is the general manager in the enterprise. The role of petroleum companies will remain indelible in the history of Nigerian economic development.

In reality, this study is too short to describe vividly the details and good qualities of the crude oil industry in Nigeria. First hand observation of the impact of the oil industry on Nigerian economic development is necessary in order to appreciate the changes that have taken place.

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